

MEMORANDUM FOR: THE RECORD

DDI - 913-82

The attached memorandum was requested by Undersecretary of the Treasury McNamar as a follow-on to a briefing on recent Soviet activity and payments prospects in the 1980s.



Trade Branch
Soviet Economy Division
Office of Soviet Analysis

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CONFIDENTIAL**USSR: Role of Western Credits**

Western willingness to extend credits to the USSR--an important factor in the rise of Soviet imports in the 1970s--will be a key element in both the scale and timing of Soviet imports in the 1980s. Western credits provided approximately 12 percent of the USSR's import capacity between 1971 and 1978. Thanks to the rapid increase in oil and gold prices, Moscow was able to sustain growth in Western imports in 1979-80 without an increase in its net debt. [REDACTED]

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The USSR, however, is encountering a hard currency bind in 1981 and, with no relief in sight, faces even more of a crunch in the coming years. The only potential large export earner on the foreign exchange horizon is the Yamal gas pipeline, the first line of which will not begin operation until 1986 or later. Even then, earnings from the project will not come close to offsetting the decline that we project in oil earnings until 1990. Meanwhile, Soviet dependence on trade with the West is not expected to diminish, and may well increase. To cover projected grain needs, build the gas pipeline, and sustain the flow of other nonagricultural goods, the USSR would have to boost its hard currency imports and debt considerably more than the 1981-85 plan implies. [REDACTED]

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To suggest the magnitude of the USSR's hard currency needs and constraints, we have constructed a balance-of-payments accounting model to project--in 1981 US dollars--trends in the

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USSR's hard currency foreign exchange accounts through 1990. The model, which consists of a series of standard accounting identities, projects overall payments trends with assumed values for key earnings items such as the volume and price of oil and gas, gold and arms sales and--in a reference case--import requirements.

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Our calculations assume that agricultural imports drop from their peak of \$12.5 billion in 1981 to \$11 billion in 1982 and to \$10 billion a year in 1983-90. One or more bad harvests in this period could, of course, raise Soviet agricultural import needs considerably. We have also assumed that imports of machinery and equipment, other than for the Yamal pipeline, remain at \$6 billion through most of the decade while imports of nonagricultural, nonmachinery items such as steel, pipe, and chemicals grow at the same rate in real terms as in 1976-80. Imports for the Yamal pipeline total \$2 billion annually during 1982-88.

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Overall, imports that must be paid for in hard currency are projected to grow under these assumptions at an annual average rate of 3 percent during 1982-90, slightly faster than implied by Planning Chairman Baybakov in his plenum address last November on the 1981-85 Plan, but not as fast as the annual 5-percent rate recorded in 1976-80. In view of the resource constraints that the USSR faces in the next several years, a slower rate of increase in import volume would make it more difficult for Soviet planners to deal with prospective shortages and raise the technological level of domestic fixed investment.

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Moscow cannot expect much help from merchandise exports in paying the rising import bill. The key variable in the calculation is Soviet oil exports whose earnings have increased sharply in the past decade as a result of spiraling world market prices. To cover the range of likely Soviet oil options, we have projected two extreme scenarios: a) oil exports constant at about 900,000 b/d through 1985 and then dropping to zero by 1990; and b) oil exports falling to 100,000 b/d by 1985 and to zero during 1986-90¹. Because of soft demand in Western Europe for oil, prices are projected to fall in real terms over the next two years before leveling off for the rest of the decade. Gas exports, on the other hand, are expected to rise to \$4 billion by 1985 and then jump to \$9 billion as the Yamal pipeline goes into operation in 1986. In 1989, gas earnings will reach \$12.5 billion if a second Yamal line is built. This assumption allows for a 25-percent increase in the real price of gas (currently undervalued in relation to other fuels) during the decade. In all, the gas project will add nearly \$9 billion annually to Soviet hard currency earnings.

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Commodity exports other than oil and gas, meanwhile, are held constant at \$9 billion a year throughout the period. While some individual export items (platinum-group metals and diamonds) will continue to be in demand in the West, most items in the

¹ These scenarios are consistent with 1985 oil production of 11 to 12 million b/d, exports to client states of 2 million b/d, and domestic oil consumption in 1985 from 9 million b/d (the 1980 level) to 10.5 million b/d (allowing for annual growth at the rate of the past few years).

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USSR's export catalog are products not well suited to Western markets (machinery) or for which Western demand has weakened (timber and other metals). If anything, our assumption may be optimistic. The volume of these exports in 1980 was lower than it was in 1978 (table 1), and further slippage has occurred in 1981. Volume exports of wood and wood products fell more than 25 percent between 1976 and 1980. Real exports of machinery and equipment and of diamonds leveled off in 1978-80, and sales of ferrous metals and agricultural products fell sharply between 1975 and 1980. In light of the sluggish forecast for the developed Western economies and in view of production problems in the USSR, we doubt that export earnings will rebound in the next several years.

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Nor are the prospects especially bright for earnings from other sources. For these projections we have assumed that Moscow will sell--at \$400 per troy ounce--all of the gold produced each year in excess of domestic requirements, and that arms receipts will remain at the 1981 level of \$5 billion a year. Earnings from transfers and invisibles (including freight and tourism but excluding interest earned) are held constant at the current level of \$1 billion a year. Interest earnings on Soviet assets in Western banks are projected to add another \$0.9 billion a year to overall receipts. The level of interest earnings is based on the assumption that Soviet assets in Western banks remain at \$7 billion a year through 1990, and that they earn interest of 13.5 percent a year.

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Table 1

USSR: Exports for Hard Currency Products Other Than Oil and Gas

(Million 1970 US Dollars)

| | <u>1970</u> | <u>1975</u> | <u>1976</u> | <u>1977</u> | <u>1978</u> | <u>1979</u> | <u>1980</u> |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Coal and coke | 93 | 86 | 89 | 88 | 70 | 65 | 58 |
| Machinery and equipment | 140 | 277 | 319 | 314 | 514 | 566 | 507 |
| Ferrous metals | 129 | 182 | 174 | 123 | 142 | 141 | 134 |
| Wood and wood products | 365 | 361 | 449 | 427 | 405 | 380 | 328 |
| Chemicals | 67 | 159 | 129 | 143 | 196 | 324 | 403 |
| Agricultural products | 205 | 264 | 227 | 256 | 175 | 138 | 112 |
| Diamonds | 175 | 282 | 284 | 291 | 376 | 380 | 376 |
| Other | 627 | 670 | 759 | 671 | 1,116 | 1,166 | 903 |
| Total | 1,801 | 2,281 | 2,430 | 2,313 | 2,994 | 3,160 | 2,821 |

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For the projections of debt service, we assumed an average annual interest rate of 13.5 percent on new commercial debt and a rate of 7.8 percent on new government-backed debt and debt incurred for the Yamal gas pipeline. We assume that the average maturity for medium- and long-term commercial debt--which accounts for about two-thirds of total commercial debt--and for government-backed debt is five years. For the Yamal pipeline, we have built in a three-year grace period with repayments over eight years. Short-term debt is held at one-third of total commercial debt throughout the 1980s. Finally, net expenditures under "errors and omissions" are held at the 1980 level of 12 percent of merchandise exports.² This assumes that the Soviets provide no extraordinary hard currency assistance to Poland after 1981. 25X1

With the above assumptions, the model was used to determine financing requirements for maintaining an assumed 3-percent annual real growth in imports. Our projections (summarized in table 2) suggest that under the high oil scenario, gross debt would rise from a respectable \$19 billion this year to \$38 billion in 1985 and \$98 billion in 1990 (in 1981 US dollars). Under the low oil scenario, debt would rise to \$60 billion in 1985 and to \$163 billion in 1990. Western credits would be needed to cover approximately two-fifths of the USSR's imports in 25X1

² "Errors and omissions" is a balancing item included in balance of payments analysis to account for unrecorded financial flows. For the USSR, the account includes such items as hard currency aid to Poland and credits extended to finance exports such as oil to European customers and machinery to LDCs. 25X1

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1982-90 under the first scenario, and three-fourths under the second.³ In either case, the debt service burden, while probably still manageable in 1985, would in the late 1980s be considered far too heavy by both Western lenders and the Soviets.

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Almost any alteration in financing terms would raise the cost to the USSR of doing business with the West. At present Moscow benefits substantially from subsidized credits extended by its major trading partners in Western Europe and Japan. Roughly 40 percent of the USSR's outstanding debt carries terms with interest rates which are 4 to 5 percent below commercial market rates. A denial of concessionary financing terms on the roughly \$2 billion a year the USSR now receives in official financing, for example, would raise Moscow's debt service costs by an average of \$100 million per year in 1982-90.

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Neither the Soviets nor Western bankers, of course, would permit such a massive Soviet financial burden to develop. Moscow instead would have to settle for lower import levels than assumed in our reference scenarios because any reduction in the volume of new Western credits would lower Soviet import capacity substantially. To estimate a more realistic import capacity, the model calculations were reversed so that imports could be projected with assumed values for future Soviet credit

³ As a sensitivity check, the same high and low oil scenarios were run with imports rising by 2 percent annually rather than by 3 percent. Debt in the high oil scenario climbed to \$37 billion in 1985 and \$85 billion in 1990. In the low oil scenario, it reached \$52 billion in 1985 and \$150 billion in 1990.

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Table 2

USSR: Hard Currency Payments If Import Volume
Increases by 3 Percent Per Year

(Billion 1981 US \$)

| | <u>1981</u> | <u>High Oil^a</u> | | <u>Low Oil^a</u> | |
|--|-------------|-----------------------------|-------------|----------------------------|-------------|
| | | <u>1985</u> | <u>1990</u> | <u>1985</u> | <u>1990</u> |
| Trade balance | -6.1 | -11.2 | -17.4 | -19.7 | -17.4 |
| Merchandise Exports | 23.9 | 22.5 | 21.7 | 14.0 | 21.7 |
| Oil | 11.5 | 9.5 | 0.0 | 1.1 | 0.0 |
| Natural gas | 3.4 | 4.0 | 12.7 | 4.0 | 12.7 |
| Other | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 |
| Merchandise imports | -30.0 | -33.7 | -39.1 | -33.7 | -39.1 |
| Receipts from gold | 2.0 | 4.2 | 4.2 | 4.2 | 4.2 |
| Receipts from Arms | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Invisibles and transfers | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Interest receipts | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Interest payments | -2.0 | -3.7 | -9.6 | -5.5 | -17.4 |
| Current account balance | 0.8 | -3.8 | -15.8 | -13.9 | -23.6 |
| Errors and omissions | -3.4 | -2.8 | -2.7 | -1.8 | -2.7 |
| Uncovered financing requirement ^b | 2.6 | 6.6 | 18.5 | 15.7 | 26.3 |
| Credits drawn ^c | 5.6 | 11.2 | 31.2 | 22.0 | 47.1 |
| Less principal repayments | -3.0 | -4.6 | -12.6 | -6.4 | -20.8 |
| Gross debt | 19.3 | 38.4 | 98.0 | 59.8 | 163.1 |
| Debt service | 5.0 | 8.3 | 22.3 | 11.8 | 38.2 |
| Debt service ratio ^d | 15% | 25% | 68% | 47% | 116% |

^a "High oil" assumes hard currency sales plateau at 900,000 b/d through 1985 then drop to zero in 1990; "low oil" assumes oil exports fall to 100,000 b/d by 1985.

^b Totals may not add due to rounding.

^c Includes a \$1.5 billion drawdown of Soviet assets held in Western banks in 1981.

^d Debt service as a percent of total merchandise exports plus receipts from gold, arms, interest receipts, invisibles, and transfers.

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drawings. Three scenarios were constructed for each oil export profile: (1) a scenario limiting the USSR to 1980 drawing levels of \$4.5 billion per year, all at commercial terms with interest rates at 13.5 percent; (2) a scenario limiting drawings to \$2.5 billion per year at commercial terms; and (3) a scenario that assumes no new credits are drawn. In each case, financing for the Yamal pipeline project is unaffected by Western credit restrictions. These calculations are summarized in table 3. 25X1

In all three cases, Soviet import capacity is substantially below the level required to allow East-West trade to ease the USSR's economic problems appreciably in the 1980s. If Moscow can maintain existing oil export levels through 1985, it could probably postpone deep reductions in imports until after 1985, even if it received no new credits. If Soviet oil exports declined substantially before 1985, however, Moscow almost certainly would have to reduce its imports more rapidly. The Soviets would incur less debt but would also have much less access to Western goods and technology. Western credit restrictions in this situation would accelerate the decline in Soviet import capacity in 1982-85 but would not make much difference thereafter. After the mid-1980s the differences in debt service among the three scenarios begin to offset the differences in the volume of new credit drawings. 25X1

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Table 3

USSR: Estimated Import Capacity

(Billion 1981 US \$
Except as noted)

| | <u>1981</u> | <u>High Oil^a</u> | | <u>Low Oil</u> | |
|--|-------------|-----------------------------|-------------|----------------|-------------|
| | | <u>1985</u> | <u>1990</u> | <u>1985</u> | <u>1990</u> |
| Reference case with unconstrained borrowing: | | | | | |
| Imports | 30.0 | 33.7 | 39.1 | 33.7 | 39.1 |
| Total debt | 19.3 | 38.4 | 98.0 | 59.8 | 163.1 |
| Debt service ratio (percent) | 15% | 25% | 68% | 47% | 116% |
| With new credits limited to \$4.5 billion at commercial rates: | | | | | |
| Imports | 30.0 | 29.6 | 25.7 | 22.2 | 25.7 |
| (As a % of reference- case imports) | | (88) | (66) | (66) | (66) |
| Total debt | 19.3 | 30.8 | 34.6 | 30.8 | 34.6 |
| Debt service ratio (percent) | 15% | 23% | 32% | 31% | 32% |
| With credits limited to commercial drawings of \$2.5 billion as commercial rates: | | | | | |
| Imports | 30.0 | 29.3 | 25.5 | 21.9 | 25.5 |
| (As a % of reference- case imports) | | (87) | (65) | (65) | (65) |
| Total debt | 19.3 | 24.9 | 23.3 | 24.9 | 23.3 |
| Debt service ratio (percent) | 15% | 18% | 22% | 24 | 22 |
| With no new credit drawings: | | | | | |
| Imports | 30.0 | 28.6 | 26.5 | 21.2 | 26.5 |
| (As a % of reference- case imports) | | (85) | (65) | (63) | (68) |
| Total debt | 19.3 | 16.9 | 10.1 | 16.9 | 10.1 |
| Debt service ratio (percent) | 15% | 12% | 11% | 17% | 11% |

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In all of our scenarios, we have projected Soviet hard currency payments through 1990 in 1981 US dollars. Thus, we have assumed that export prices--except for oil and gas as noted - above--and import prices move together. Because of the decline in real oil prices in 1982-83, Soviet terms of trade deteriorate in those years but improve somewhat throughout the rest of the decade due to the continued rise in real gas prices. The projections would be less pessimistic if Western economic growth--and demand--picked up enough to cause another round of increases in the real price of oil and other raw materials.

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